

high fever and leukocytosis and marked prostration who are not benefited by liver injections should be given a trial of neoprontosil, as the element of infection may so dominate the clinical picture that the bowel lesions cannot heal until this is overcome. Serum and vaccines have not proved helpful under these conditions—at least in the writer's experience. The question of food sensitivity is difficult to analyze; it must be given careful consideration in stubborn cases. The removal of a single offending protein food, such as milk, from the diet may make the difference between complete relief and interminable relapse. Probably the most difficult factor to combat is the over-excitability of the nervous system. Diarrhea as a manifestation of this condition is most troublesome to control, whether the bowel wall is ulcerated or not. Large doses of thiamin chlorid may be beneficial. Sedatives are often helpful. Failures with liver therapy are most likely to be in this group.

Third: The extent of the destructive process in the bowel wall must be considered. If the colon has become a narrowed, immobile tube, any improvement occurring will be slow and incomplete. The stools are likely to remain frequent in occurrence and unformed as the normal peristaltic and dehydration functions of the large bowel are lost. Patients with such damage to their colons cannot be expected to make a complete recovery on liver therapy, although the forward march of the pathologic process may be halted.

Fourth: The choice of liver extract may have an important bearing on the outcome of treatment. Up to the present time highly concentrated liver extract has been used. However, "highly concentrated" applies only to the anti-anemic substance, fraction G, and in liver extract so concentrated practically all of vitamin B₁ and B₂ are eliminated. It is not only probable that any substance effective in the treatment of ulcerative colitis may also be lost in the concentration process, but the administration of an unconcentrated liver solution parenterally to four cases recently indicates that it may be more effective than the concentrate. It was given intramuscularly in a dose of five cubic centimeters two or three times a week, representing only 5 U. S. P. units (anti-anemic) per dose.*

IN CONCLUSION

The effectiveness of liver extract in the treatment of idiopathic ulcerative colitis may best be summarized by stating that it is evidently beneficial in the majority of cases; in a few the results are truly brilliant, and in a few no definite benefit is obtained. In introducing a new form of therapy for any disease as uncontrollable as ulcerative colitis, overenthusiasm must be avoided, and failures, rather than condemning the treatment as a whole, must be extensively studied to ascertain the cause if possible. The probable reasons for such failures have been pointed out. As more cases are treated and our knowledge of this treatment is increased, not only may the results be improved, but the indications for success or failure may be

more clearly defined. When liver therapy was first shown to be effective in treating pernicious anemia, it was thought that all macrocytic hyperchromic anemias should respond. Gradually, over a period of years, it has been shown that many do not, because the mechanism of their production differs from that of pernicious anemia. In a like manner the future may show us that what we now call ulcerative colitis of unknown etiology represents different groups of cases varying in their basic etiology, and consequently in their response to liver therapy. At present all cases of idiopathic ulcerative colitis should be given a thorough, prolonged trial of parenteral liver treatment.

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EPIDERMOPHYTOSIS OF THE HANDS AND FEET: ITS TREATMENT*

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THIS much-discussed subject is interesting because the disease is so very prevalent and its various manifestations tax one's therapeutic resourcefulness more than most any other dermatological problem. The fact that there are recommended literally hundreds of remedies does not necessarily mean that none of them are effective, but rather is due to variations in the reactions of individuals to the infection and to the therapy applied. No attempt will be made here to cover all of the various methods of treatment, for it is hoped that this will be done by the discussants. One must be prepared to quickly modify the treatment to meet changing conditions. In my experience the results are much more satisfactory if the patient is seen often. During a week's absence from the office an application which helps at first may rapidly become irritating on account of some change in the host—due to foods, fatigue, or something else.

FACTORS TO BE CONSIDERED IN TREATMENT

First, one must consider the patient's general health, habits, and environment. Naturally a warm, moist skin that is not kept clean offers excellent soil for the growth of fungi. Where the sweat is more concentrated it has some fungicidal action, but where it is very dilute, as a result of excessive perspiration, this is absent. I have seen a long-standing fungus infection of one foot in a patient with acrodermatitis chronica atrophicans clear up

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* Horse liver extract may be more effective than beef liver extract.

shortly after a nerve-blocking injection had stopped excessive sweating in that extremity.

We all have observed the bad effects on this disease of a high carbohydrate diet and the abuse of alcohol. Trichophytin and polyvalent "vaccine" injections have not been successful in my experience. Nor has the internal administration of iodine.

LOCAL TREATMENT

The local treatment naturally will vary with the case and must be modified from time to time to meet changing conditions. In the very acute phase, where there is much inflammation, swelling, and lymphadenitis, complete rest and continuous compresses with liquor aluminum acetate, boric acid, or Epsom salt solutions are indicated. Frequently more relief is had when these solutions are cold. Permanganate soaks are useful at all stages, and even in the acute inflammatory phases soaking in dilute solutions (1-2,000, to 10,000) for half an hour, twice daily, will help, at the same time continuing the compresses between soakings. As soon as the inflammation and edema subside, various procedures are available. The application of a 10 to 20 per cent mixture of tannoform in talcum and zinc oxid will often further allay irritation and inhibit secretions. At this time, sponging with a 5 to 10 per cent solution of citric acid, or with plain vinegar, following the soakings, will not only inhibit fungus growth, but will remove some of the permanganate stain. Before using the tannoform powder, one may try a powder containing 2 per cent menthol and 5 per cent salicylic acid in boric acid, zinc oxid, and starch. Frequently this will be effective in its fungicidal action and in relieving pruritus. During all the stages the permanganate soaks are continued, unless the skin becomes too dry. Also the vinegar or citric acid may be continued. For denuded or whitish, sodden areas between the toes, I often use the Castellani or Berwick's dyes. When the process becomes less active, the use of salves may be attempted, starting with 8 per cent salicylic acid, and 10 per cent sulphur in zinc paste. Individual vesicles may be opened and the small cavities painted with the Castellani's dye or a one per cent solution of iodine in alcohol. At times Berwick's dye, containing one-half per cent iodine, is useful in this manner.

I rarely use the salicylic benzoic acid (Whitfield's) salve, much preferring the salicylic-sulphur combination. In the later subacute or sluggish stages, I use the various tars in ointments, preferring cadeberry or crude coal-tar.

For a quickly stimulating, infiltration-dissipating, and antipruritic effect, I often use, instead of the tar, a butane gas freezing spray. The antipruritic action is definite and may last for several hours.

It is only in very occasional, stubborn cases that I find roentgen therapy desirable. I have seen too many examples of roentgen atrophy and depigmentation in cases that have gone the rounds of physicians, never giving any one of them a fair chance. It is these wandering patients who often get into trouble, and whose dermatophytosis is unduly prolonged.

COMMENT

It is interesting to observe the prompt benefit that follows the use of lemon juice or citric acid solutions, or vinegar. For the prophylactic and after-treatment, these acid preparations are quite valuable. The fact that the most useful local remedies are acid is of interest in connection with the well-known and valuable work of Peck.¹ He devised a successful method of treating the disease locally with mixtures of ingredients of sweat (lactic acid, propionic acid, butyric acid, and ascorbic acid). Ormsby and others, for years, have recommended acetic acid solutions. For several years I have used vinegar as a wash in all of my cases. Last year Dr. John C. Belisario of Sydney told me of his lemon-juice "cure." He rubs the cut surface of a lemon into the areas several times daily. Last summer, while en route to Honolulu, I had an acute vesicular attack on one foot and one hand, and used lemon vigorously several times daily. The condition cleared up inside of two weeks. A Stanford medical student who had had vesicular dermatophytosis of the palms for two years cleared up completely within two weeks with frequent use of lemon juice. In the later stages, and after apparent recovery, 5 per cent citric acid in a salve is valuable. I find that, for several weeks after recovery, it is necessary to continue the frequent application of some grease.

These remarks are based on rather extensive personal experience, and it is hoped that, in the discussion to follow, many more ideas will be presented, for it is usually the general discussion that makes a paper worth while.

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HYPEREMESIS GRAVIDARUM*†

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OF late, great interest has been evidenced in the etiology and treatment of hyperemesis gravidarum; and in reviewing the literature pertaining to this subject, we have been directed to the part played by hormones and vitamins.

Varied and sundried treatments and theories of etiology have been attributed to either hormones or vitamins, or both. Of particular concern in this field have appeared the value and significance of suprarenal cortex and vitamin therapy, especially vitamin B₁.

The underlying thought in using vitamin B₁ is that it aids in oxidizing the accumulation of lactic and pyruvic acids, which accumulate in the smooth

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† A clinical study of 120 cases treated with vitamin B₁ and suprarenal cortex.